

FIG. 1

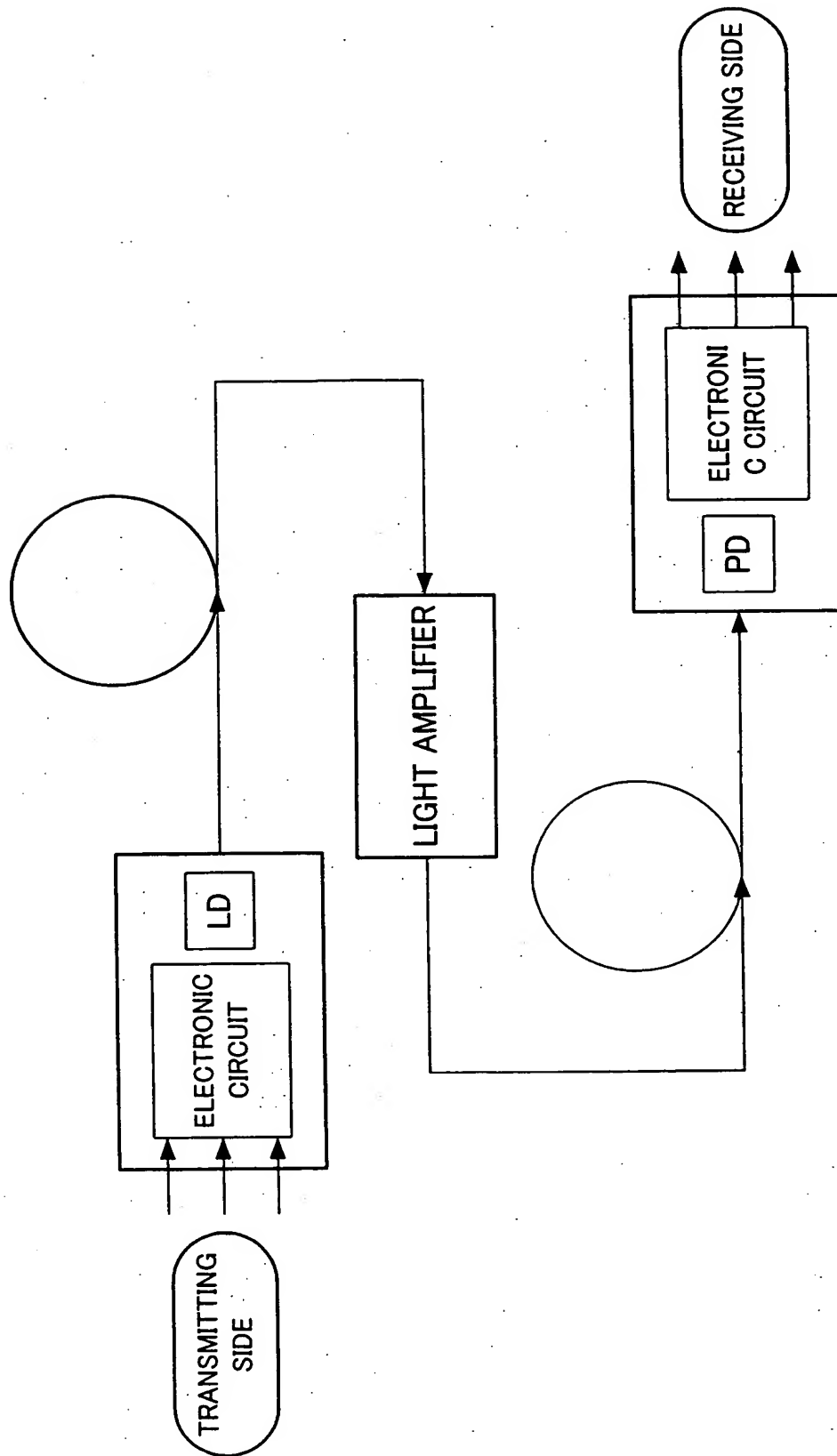


FIG. 2

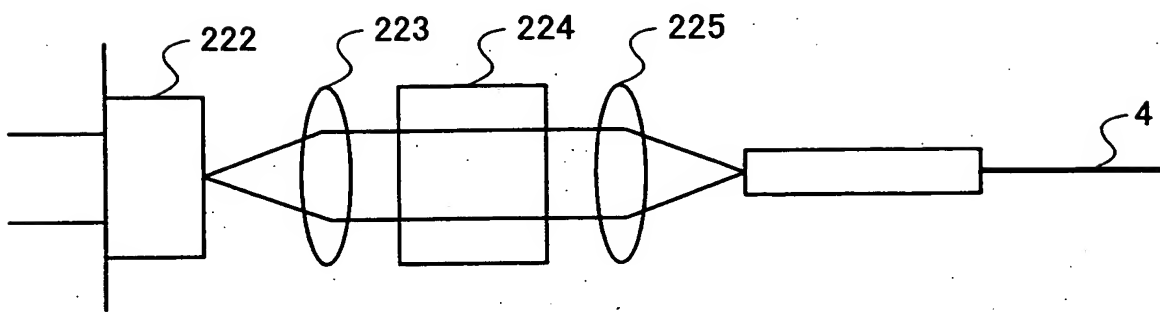


FIG. 3A

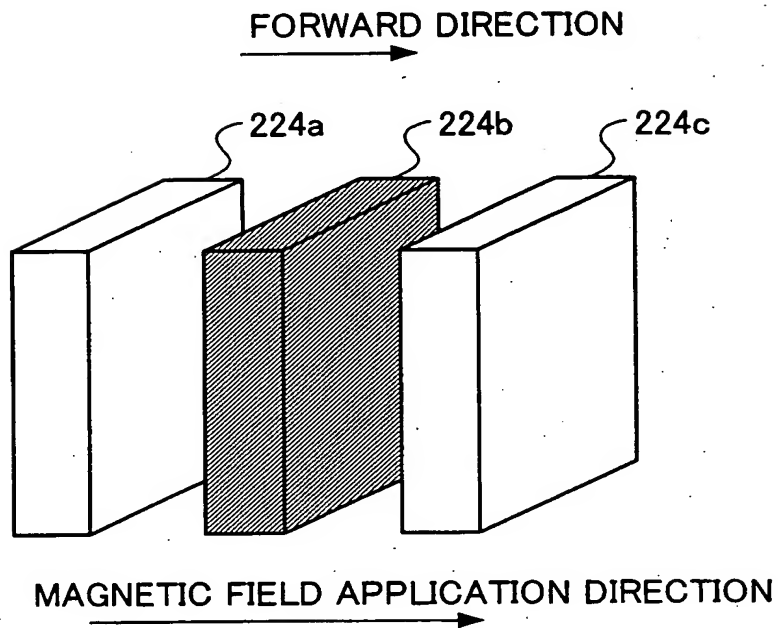


FIG. 3B

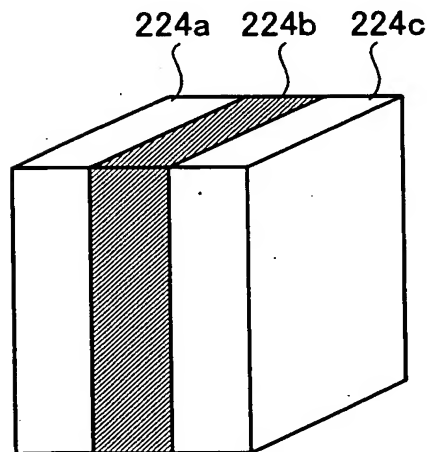


FIG. 4

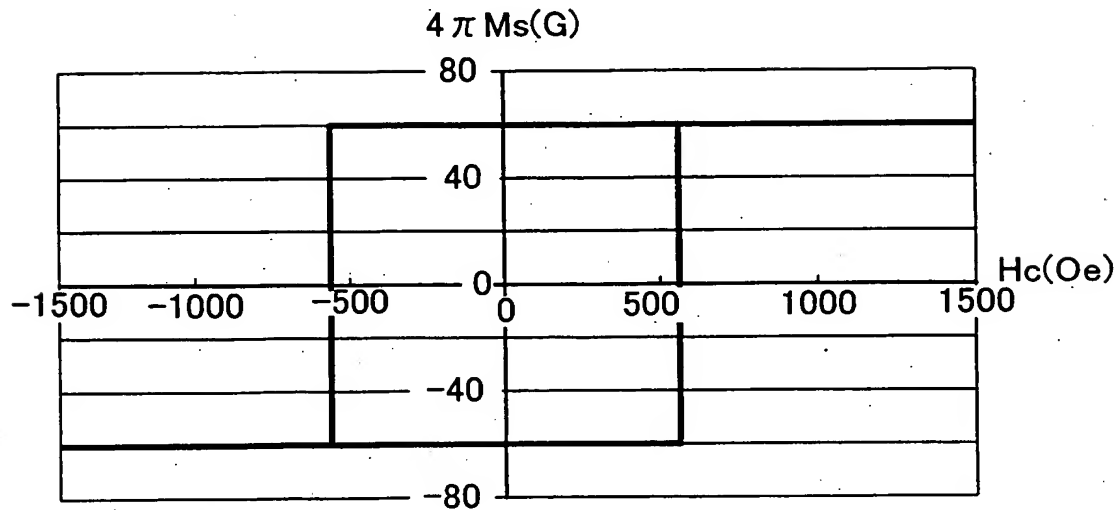


FIG. 5

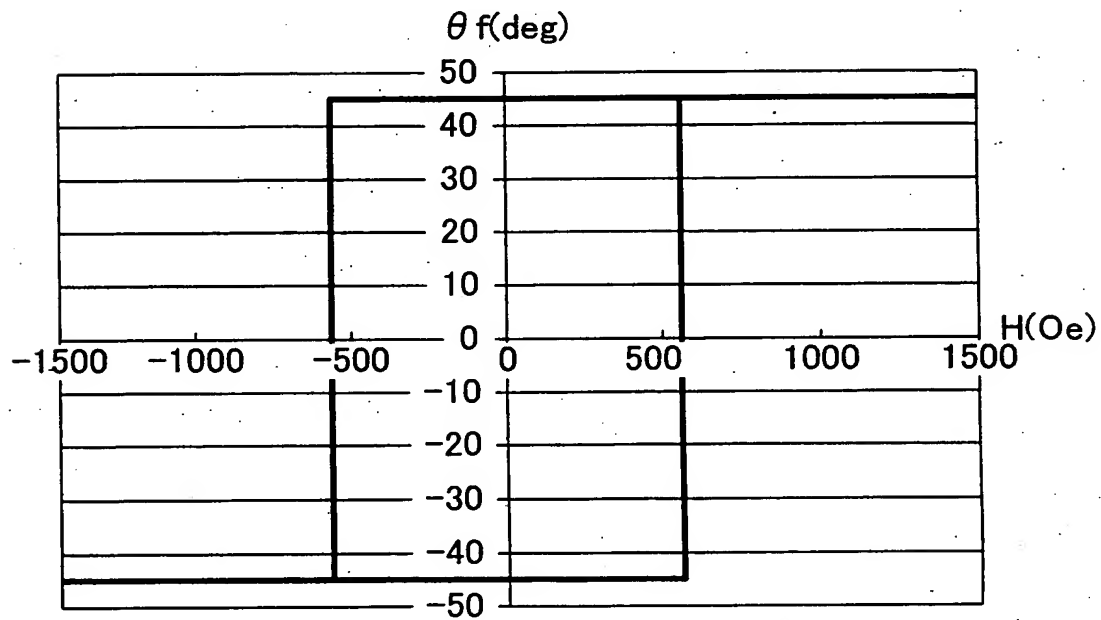


FIG. 6

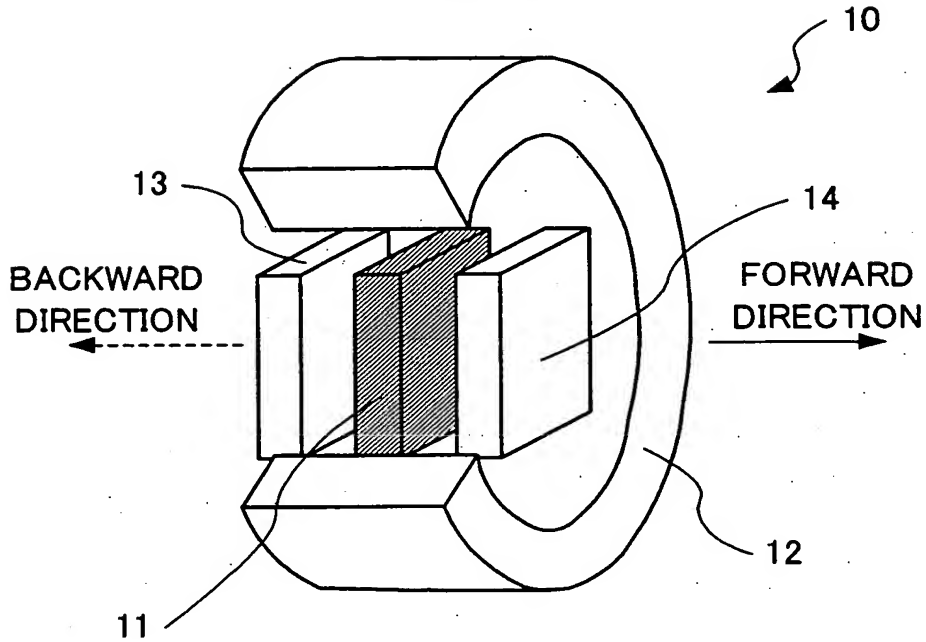


FIG. 7A

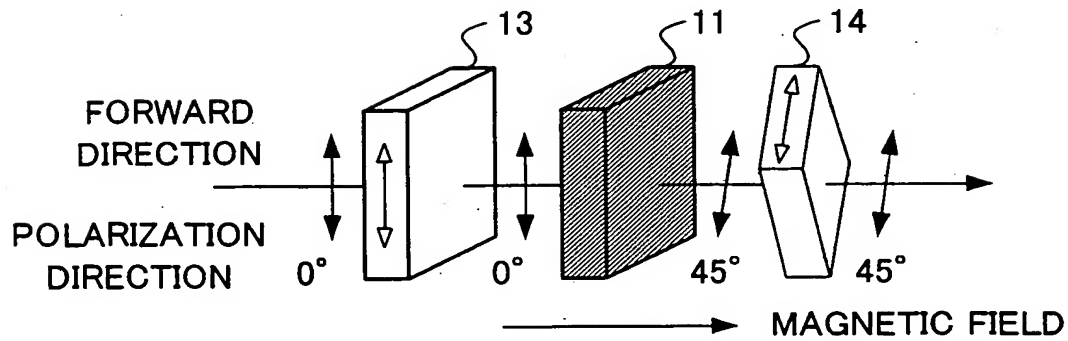


FIG. 7B

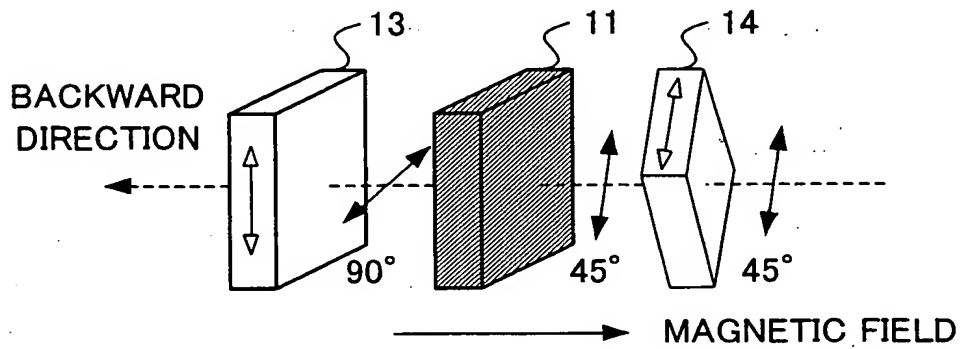


FIG. 8

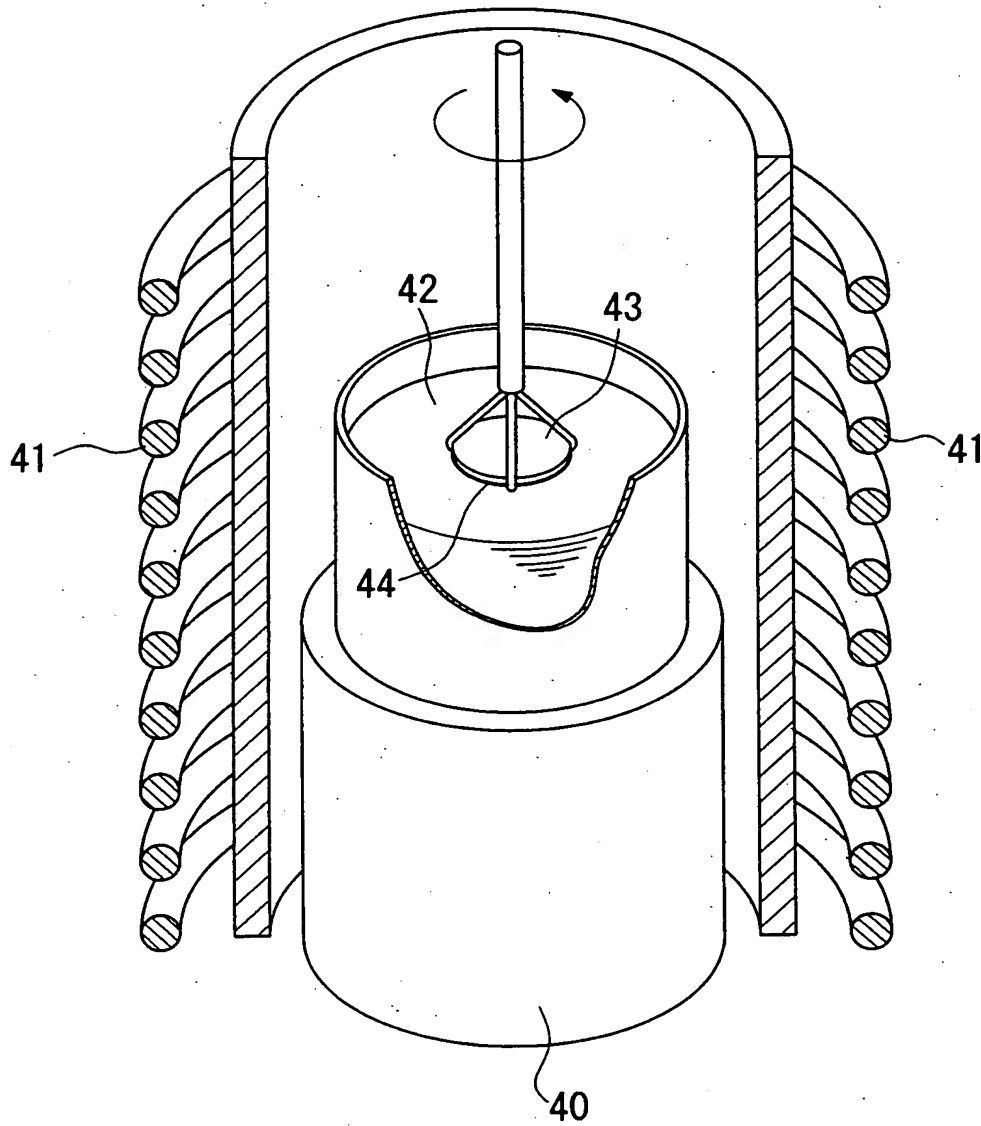


FIG. 9

SAMPLE No.	CHEMICAL COMPOSITION	ROTARY MOMENT (° / cm)	TEMPERA- TURE PROPERTY		WAVE- LENGTH PROPERTY		INSERTION LOSS (dB)	MAGNE- TIC TYPE	REMARKS
			(%)	(° / °C)	(%)	(° / nm)			
1	$\text{Bi}_{1.0}\text{Gd}_{0.4}\text{Tb}_{1.2}\text{Yb}_{0.4}\text{Fe}_{4.0}\text{Ga}_{1.0}\text{O}_{12}$	800	10.8 0.078	6.8 0.061			0.07	HARD MAGNETIC	PRESENT INVENTION
2	$\text{Bi}_{1.2}\text{Tb}_{1.4}\text{Y}_{0.4}\text{Fe}_{3.8}\text{Ga}_{1.2}\text{O}_{12}$	950	11.8 0.085	6.8 0.061			0.12	HARD MAGNETIC	COMPARATIVE EXAMPLE (CONTAINING NO Gd)
3	$\text{Bi}_{1.2}\text{Gd}_{1.2}\text{Yb}_{0.6}\text{Fe}_{3.9}\text{Ga}_{1.1}\text{O}_{12}$	950	13.9 0.100	8.3 0.075			0.02	HARD MAGNETIC	COMPARATIVE EXAMPLE (CONTAINING NO Tb)
4	$\text{Bi}_{0.7}\text{Gd}_{1.1}\text{Tb}_{1.2}\text{Fe}_{4.2}\text{Ga}_{0.8}\text{O}_{12}$	650	10.4 0.075	6.8 0.061			0.07	HARD MAGNETIC	COMPARATIVE EXAMPLE (CONTAINING NO Yb)
5	$\text{Bi}_{1.2}\text{Gd}_{1.8}\text{Fe}_{4.0}\text{Ga}_{0.5}\text{Al}_{0.5}\text{O}_{12}$	800	11.8 0.085	8.2 0.074			0.07	HARD MAGNETIC	JAPANESE PATENT LAID-OPEN No. 6- 222311
6	$\text{Bi}_{1.0}\text{Eu}_{2.0}\text{Fe}_{4.0}\text{Ga}_{0.5}\text{Al}_{0.5}\text{O}_{12}$	800	13.9 0.100	8.3 0.075			0.04	HARD MAGNETIC	JAPANESE PATENT LAID-OPEN No. 9- 185027
7	$\text{Bi}_{1.37}\text{Tb}_{1.63}\text{Fe}_{4.0}\text{Ga}_{0.84}\text{Al}_{0.15}\text{O}_{12}$	1050	10.0 0.072	6.7 0.060			0.11	HARD MAGNETIC	JAPANESE PATENT LAID-OPEN No. 9- 328398
8	$\text{Bi}_{1.48}\text{Tb}_{1.08}\text{Ho}_{0.44}\text{Fe}_{4.09}\text{Ga}_{0.77}\text{Al}_{0.14}\text{O}_{12}$	1100	15.3 0.110	6.9 0.062			0.09	HARD MAGNETIC	JAPANESE PATENT LAID-OPEN No. 10- 31112
9	$\text{Bi}_{1.0}\text{Gd}_{0.3}\text{Tb}_{1.4}\text{Yb}_{0.3}\text{Fe}_{4.3}\text{Ga}_{0.7}\text{O}_{12}$	920	9.7 0.072	6.7 0.060			0.07	HARD MAGNETIC	PRESENT INVENTION

FIG. 10

SAMPLE No.	CHEMICAL COMPOSITION	ROTARY MOMENT	TEMPERA- TURE PROPERTY		WAVE- LENGTH PROPERTY	INSERTION LOSS	MAGNE- TIC TYPE	REMARKS
			(%)	(° / °C)				
			(° / cm)	(%) (° / nm)				
1	$\text{Bi}_1\text{Gd}_{0.4}\text{Tb}_{1.2}\text{Yb}_{0.4}\text{Fe}_{4.0}\text{Ga}_{1.0}\text{O}_{12}$	800	10.8 0.078	6.8 0.061	0.07	HARD MAGNETIC	PRESENT INVENTION (LARGE AMOUNT OF Tb)	
10	$\text{Bi}_{1.1}\text{Gd}_{0.9}\text{Tb}_{0.7}\text{Yb}_{0.3}\text{Fe}_{4.0}\text{Ga}_{1.0}\text{O}_{12}$	850	11.4 0.082	7.1 0.064	0.04	HARD MAGNETIC	PRESENT INVENTION (LARGE AMOUNT OF Gd)	
11	$\text{Bi}_{1.2}\text{Gd}_{0.5}\text{Tb}_{0.8}\text{Yb}_{0.5}\text{Fe}_{4.0}\text{Ga}_{1.0}\text{O}_{12}$	950	11.8 0.085	7 0.063	0.06	HARD MAGNETIC	PRESENT INVENTION (LARGE AMOUNT OF Bi)	
12	$\text{Bi}_{1.1}\text{Gd}_{0.6}\text{Tb}_{0.9}\text{Yb}_{0.4}\text{Fe}_{4.9}\text{Ga}_{0.1}\text{O}_{12}$	—	—	—	—	SOFT MAGNETIC	COMPARATIVE EXAMPLE	

FIG. 11

SAMPLE No.	CHEMICAL COMPOSITION	ROTARY MOMENT (° /cm)	TEMPERA- TURE PROPERTY		WAVE- LENGTH PROPERTY	INSERTION LOSS (dB)	MAGNE- TIC TYPE	REMARKS
			(%)	(° /°C)				
13	Bi _{1.0} Gd _{0.4} Tb _{1.2} Yb _{0.4} Fe _{4.0} Ga _{0.7} Al _{0.3} O ₁₂	800	10.8	6.8		0.07	HARD MAGNETIC	PRESENT INVENTION
			0.078	0.061				
14	Bi _{1.2} Gd _{0.4} Tb _{1.2} Yb _{0.4} Fe _{4.0} Ga _{0.8} Ge _{0.1} Sc _{0.1} O ₁₃	950	11.1	6.9		0.07	HARD MAGNETIC	PRESENT INVENTION
			0.080	0.062				
15	Bi _{1.2} Gd _{0.4} Tb _{0.7} Yb _{0.6} Ca _{0.1} Fe _{4.2} Al _{0.5} In _{0.2} Si _{0.1} O ₁₄	950	11.8	7.0		0.06	HARD MAGNETIC	PRESENT INVENTION
			0.085	0.063				
16	Bi _{0.9} Gd _{0.7} Tb _{0.7} Yb _{0.3} Sn _{0.2} Eu _{0.2} Fe _{4.5} Ga _{0.4} Ti _{0.1} O ₁₂	770	12.2	7.2		0.10	HARD MAGNETIC	PRESENT INVENTION
			0.088	0.065				
17	Bi _{1.0} Gd _{0.5} Tb _{0.5} Yb _{0.5} Dy _{0.3} Lu _{0.2} Fe _{4.0} Ga _{1.0} O ₁₂	800	11.1	7.2		0.09	HARD MAGNETIC	PRESENT INVENTION
			0.080	0.065				
18	Bi _{0.9} Gd _{0.9} Tb _{0.7} Yb _{0.4} Tm _{0.3} Fe _{4.1} Ga _{0.9} O ₁₂	770	11.8	7.2		0.095	HARD MAGNETIC	PRESENT INVENTION
			0.085	0.065				
19	Bi _{1.1} Gd _{0.6} Tb _{0.9} Yb _{0.2} Er _{0.2} Fe _{4.3} Ga _{0.7} O ₁₂	850	11.1	7.1		0.09	HARD MAGNETIC	PRESENT INVENTION
			0.080	0.064				
20	Bi _{1.0} Gd _{0.4} Tb _{1.1} Yb _{0.3} Ho _{0.2} Fe _{4.2} Ga _{0.8} O ₁₂	800	10.8	6.9		0.07	HARD MAGNETIC	PRESENT INVENTION
			0.078	0.062				
21	Bi _{0.9} Gd _{1.1} Tb _{0.8} Yb _{0.2} Y _{0.1} Fe _{4.6} Ga _{0.4} O ₁₂	770	11.1	7.0		0.07	HARD MAGNETIC	PRESENT INVENTION
			0.080	0.063				

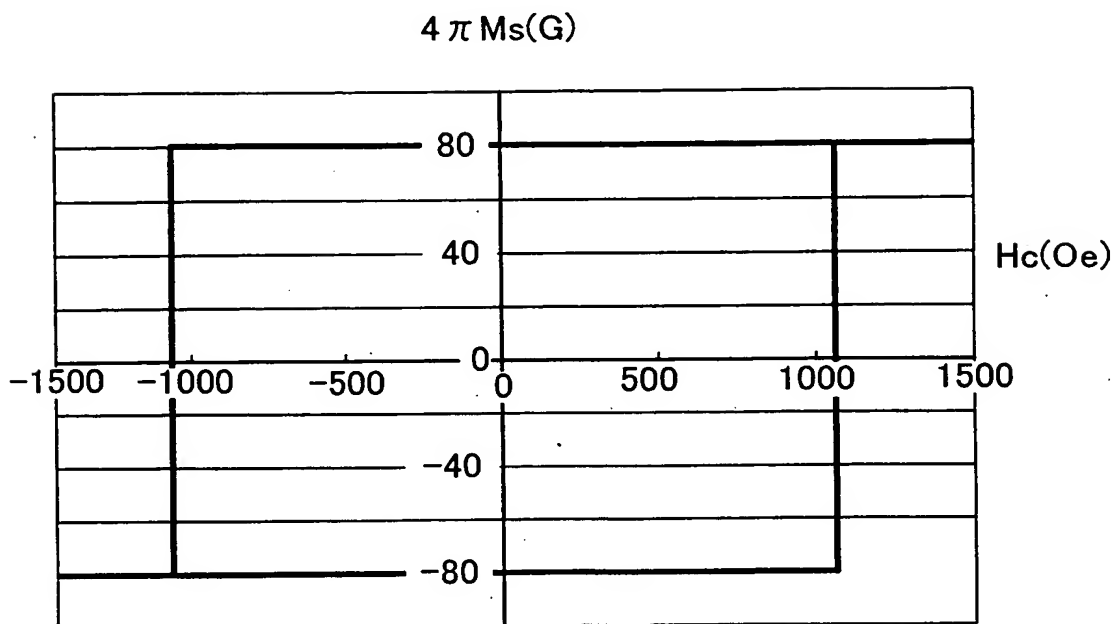


FIG. 12A

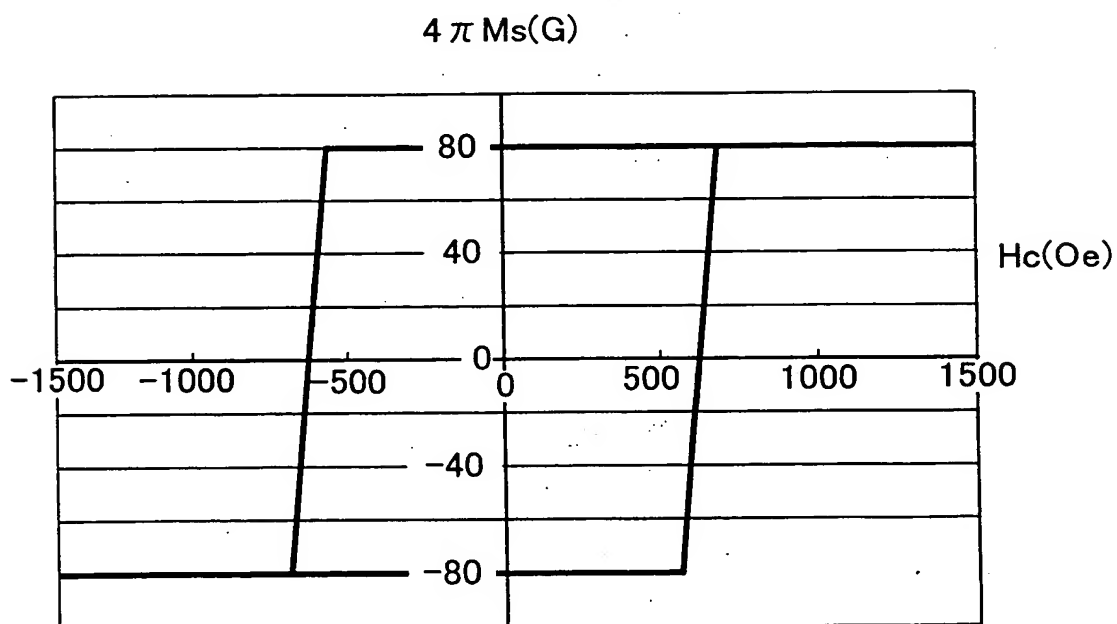


FIG. 12B

FIG. 13

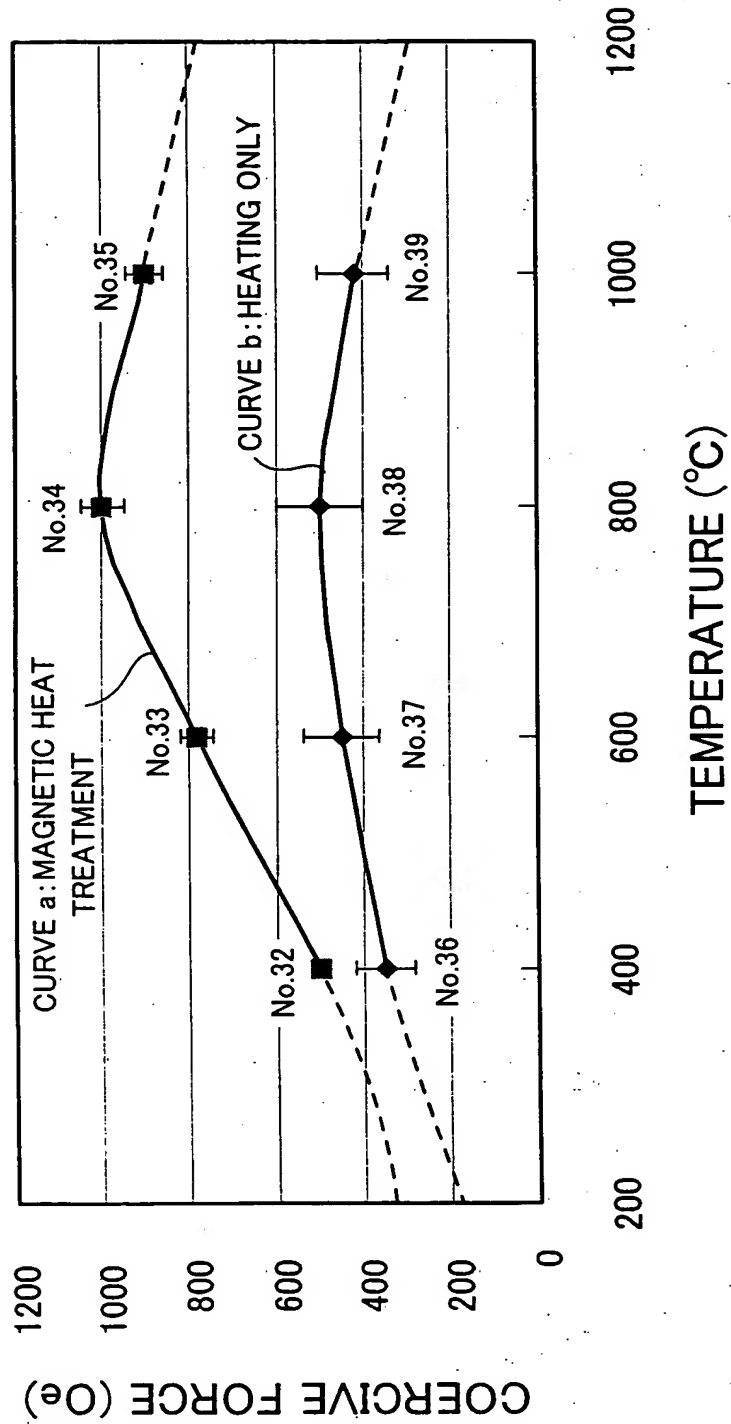


FIG. 14

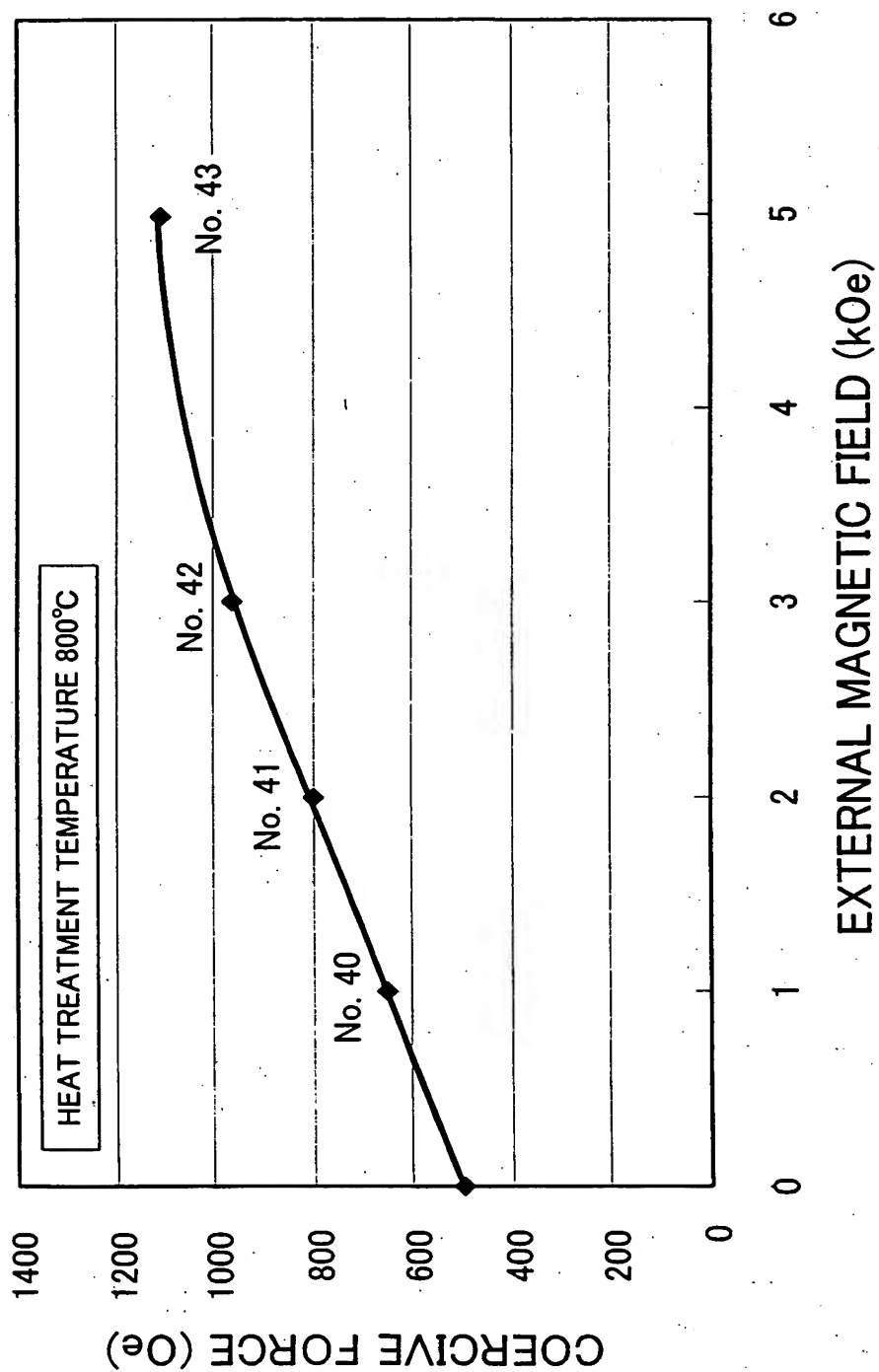


FIG. 15A

SECTION OF A SAMPLE CUT BY WIRE SAW

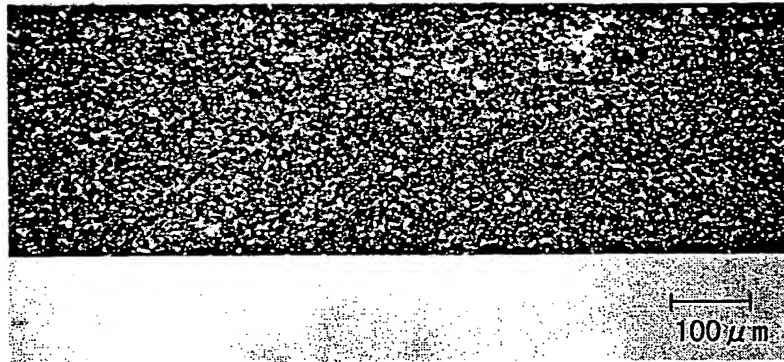


FIG. 15B

SECTION OF A SAMPLE CUT BY DICING MACHINE

